

Appl. No. 10/644,441
Response Dated October 7, 2004
Reply to Office action of September 15, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. [Original] A propeller shaft assembly comprising a thin-walled tubular member, a connecting member fixed to each end of the tubular member, and a support member fixed within the tubular member, the support member comprising a rigid foamed plastic extending a first length (L1) within the tubular member and engaging an interior surface of the tubular member to increase the bending frequency of the propeller shaft assembly.
2. [Original] An assembly according to claim 1 wherein said support member comprises an open-cell foamed plastic impregnated with a high modulus resin or cement.
3. [Original] An assembly according to claim 1 wherein said support member is tubular.
4. [Original] An assembly according to claim 3 wherein said support member includes a plurality of openings formed along the first length (L1) for reducing the weight of the support member.
5. [Original] An assembly according to claim 2 wherein said open-cell foamed plastic is flexible.
6. [Original] An assembly according to claim 1 wherein said tubular member comprises metal or reinforced plastic.
7. [Original] An assembly according to claim 1 wherein said tubular member has a second length (L2) and the ratio L1/L2 is less than 1.0.
8. [Original] An assembly according to claim 1 wherein the connecting members are joint elements or stub shafts.

Appl. No. 10/644,441
Response Dated October 7, 2004
Reply to Office action of September 15, 2004

9. [Original] A power transmission shaft comprising a thin-walled metal tube having a joint element or stub shaft fixed to each end thereof, and a support member co-axially located within said tube and engaging an interior surface of said tube, said support member comprising a rigid foamed plastic extending along a length of the tubular member.

10. [Original] A power transmission shaft according to claim 9 wherein the support member has a first length (L1) and said tube has a second length (L2) and the ratio L1/L2 is less than 1.0.

11. [Original] A power transmission shaft according to claim 9 wherein the support member includes a plurality of openings formed along the first length (L1) for reducing the weight of the support member.

12. [Original] An assembly according to claim 9 wherein said support member comprises an open-cell foamed plastic impregnated with a high modulus resin or cement.

13. [Original] An assembly according to claim 12 wherein said open-cell foamed plastic is flexible.

14. [Original] A method of producing a rigid power transmission shaft comprising:
providing a thin-walled metal or reinforced plastic tube; and
introducing a support member co-axially within said tube to engage an interior surface of said tube, said support member comprising a rigid foamed plastic extending along a length of the tubular member.

15. [Withdrawn] A method according to claim 14 wherein the step of introducing includes impregnating an open-cell plastic foam with a high modulus resin or cement, and introducing said impregnated plastic foam into an interior of said tube.

Appl. No. 10/644,441
Response Dated October 7, 2004
Reply to Office action of September 15, 2004

16. [Withdrawn] A method according to claim 14 wherein the step of introducing includes foaming a plastic or cement support member within an interior of said tube.

17. [Withdrawn] A method according to claim 16 wherein the step introducing includes co-axially locating a mandrel within said tube and foaming a plastic or cement support member in a region between said mandrel and said tube.

18. [Withdrawn] A method according to claim 15 wherein the step of introducing said impregnated plastic foam into an interior of said tube occurs before said impregnated plastic foam has set up.

19. [Withdrawn] A method according to claim 15 wherein the step of introducing said impregnated plastic foam into an interior of said tube occurs after said impregnated plastic foam has set up.